spidertracks

satellite based aircraft tracking & emergency notification system

P. Jerry Lee, CFII | US National Sales Manager

Spidertracks- WHAT IS IT?

The Spidertracks system merges four widely used and trusted technology platforms into a robust aircraft tracking and automated alert system.
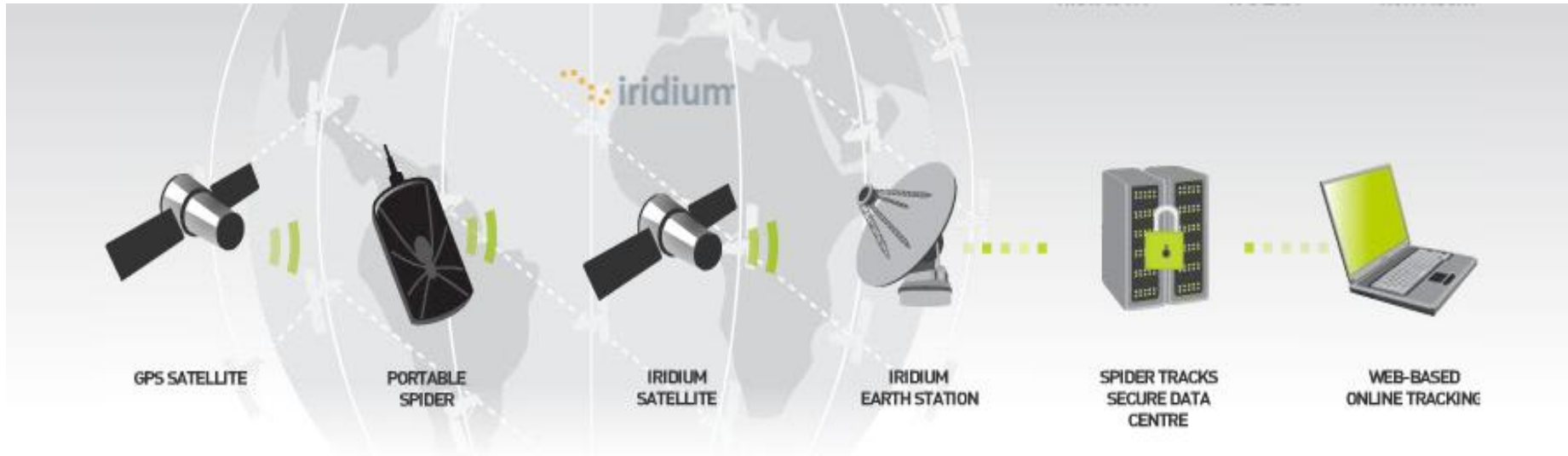
★**The Iridium Satellite Network**- Globally trusted and commercially available for over 10 years

★**GoogleMap**- A widely used and intuitive cloud based mapping platform used globally by millions

★**Global Positioning System-** Commercially available for nearly 20 years

★**World Wide Web**

Spidertracks- HOW IT WORKS.

- **GPS coordinates** are received by the spider hardware and transmitted at user nominated time or distance intervals. Typically a 2 minute interval is used.

- **Position information** is beamed via Iridium's network of 66 orbiting satellites, down to Iridium's receiving station, then to spidertracks data centers.

- **Points are then translated into a visual record** of the journey, viewable in real–time, laid over GoogleMap.

- **Tracks and flight data** can be accessed by multiple authorized users, anytime, from anywhere in the world via the Internet.

- SOS alerts or messages are sent from spidertracks website via cellphone or email to nominated contacts.

Spidertracks- HOW IT WORKS.
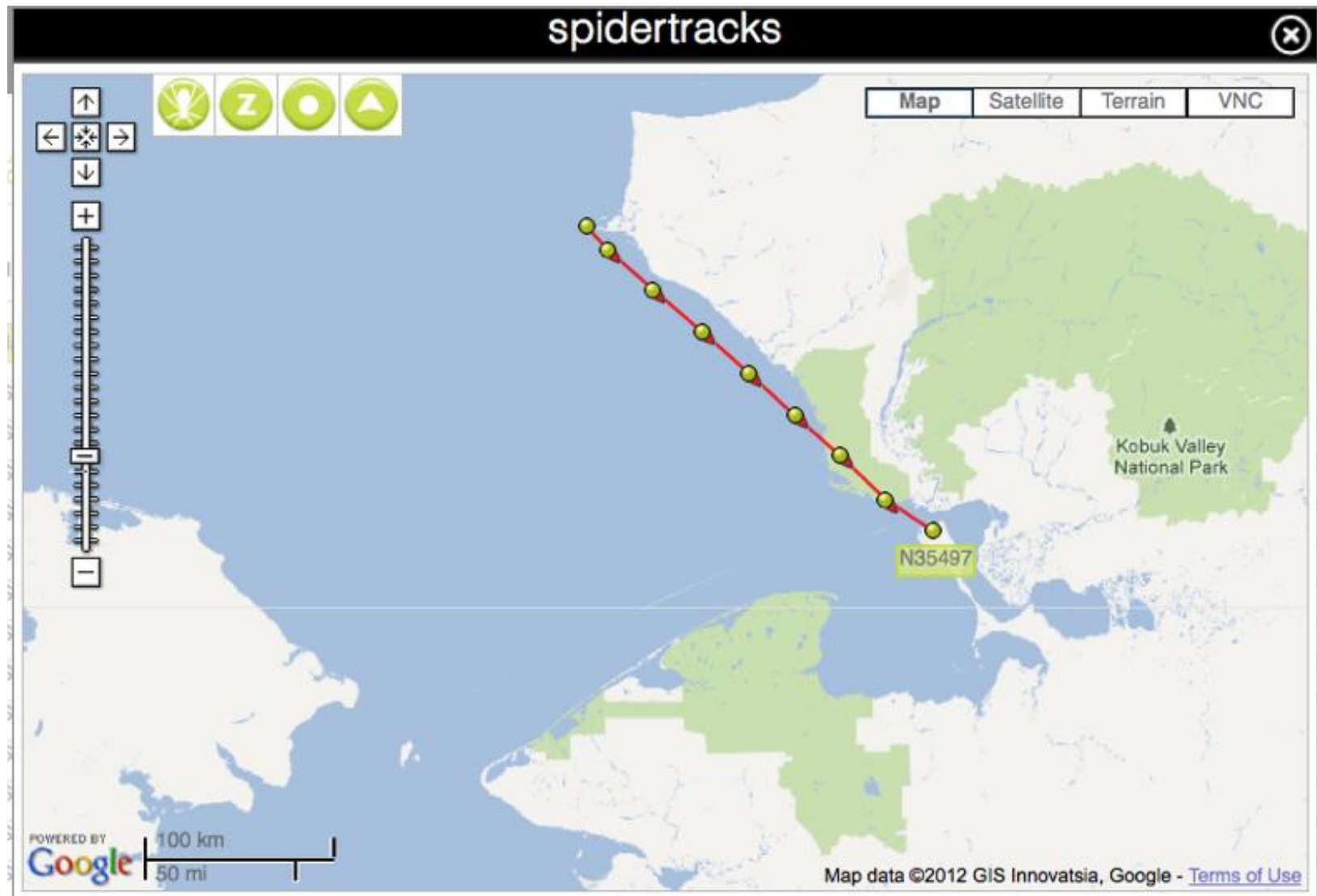
Spidertracks- HOW IT WORKS.
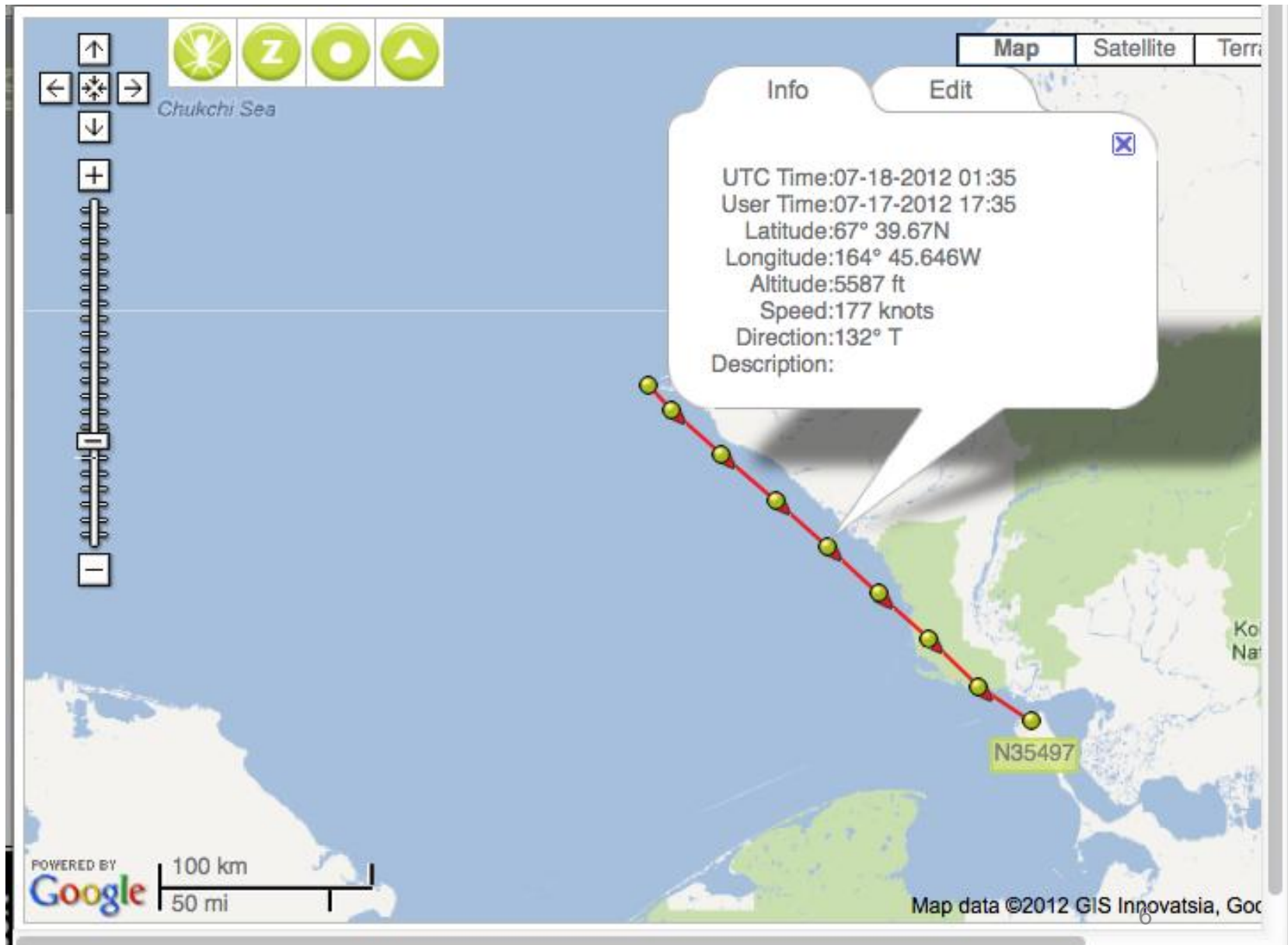
Spidertracks- MAP OVERLAY

★Standard Political Map

★Terrain (Topo style) Map

★Satellite Imagery Overlay

★VNC (Visual Navigation Chart)

The Spidertracks unit is designed to operate in normal modes with little interaction from aircrew. <u>It does not have an on-off switch.</u>

The Spidertracks unit will always post out position reports as long as the following conditions are met:

1) It has a clear view of the sky.

2) It has clean and adequate power from aircraft.

3) The unit is tied to a valid data account.

As long as these three conditions are met, the unit will always post out tracks.

Spidertracks- AUTOMATED ALERTS

The Spidertracks System is capable of generating a fully automated call for help when aircrew is unable to do so.

How does this work?

Via an auxiliary & fully optional set of instructions sent to our ground based servers (which we call *SPIDERWATCH)* the ground based servers are commanded to expect additional tracks at the pre-set interval, which is typically every 2 minutes.

While *Spiderwatch* mode is engaged, should the tracks stop unexpectedly- *as in the case of an off-airport landing or ditching,* the ground based server will generate an alert after 3 consecutive reporting point time cycles are missed. Typically, a 6 minute time period.

Spidertracks- AUTOMATED ALERTS

Spiderwatch mode can be set as the default setting for all flights, or can alternatively be activated by aircrew for selected flights.

The system will still post tracks (provided the three conditions are met) even if the Spiderwatch mode is not selected for a flight or a portion of a flight.

If an [automated] alert is generated, it first arrives to trusted, pre-determined recipients. They must acknowledge receipt of the alert via SMS text message, email, or web portal.

Aircrew must suspend Spiderwatch mode prior to de-energizing the unit to avoid false positive alert generation.

Why Spiderwatch mode?

"By utilizing the Spiderwatch mode we effectively move the trigger for a call for help from a broken airplane to our multiple, in parallel ground based servers housed in secure buildings."

The unit, its power source, and antennas need not survive the crash for the system to work flawlessly.

In addition to real time aircraft tracking and the ability to generate automated alerts, the Spidertracks System is also capable of accomplishing the following:

Manually generated SOS alerting from aircrew

Two way global text messaging via companion Bluetooth Device (smartphone)

Automatic takeoff and landing notifications

One-touch position marking

Spidertracks- WEB ADMINISTRATION

Via the web-based portal, the client may control the following parameters:

Unit configuration (N-number or other ID displayed)

Reporting point interval

Spiderwatch mode default on/off

Clearing/viewing alerts

Authorized users

Pricing for Spidertracks data subscription is generally based on the number of hours used in a given month.

The mean data pricing for most users is about $2/hr at a 2 minute reporting point interval.

AIRCRAFT LOCATION AND EMERGENCY ALERT SYSTEM